

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number  
**WO 2004/032580 A3**

(51) International Patent Classification<sup>7</sup>: **B01D 46/00**

(21) International Application Number:  
PCT/US2003/031119

(22) International Filing Date: 2 October 2003 (02.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/415,924 3 October 2002 (03.10.2002) US

(71) Applicant (for all designated States except US): **LAIRD TECHNOLOGIES, INC.** [US/US]; Shielding Way, Delaware Water Gap, PA 18327 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **JOHNSON,**

Richard, Norman [US/US]; 1504 Vanessa Circle, Encinitas, CA 92024 (US). **VAN HAASTER, Philip** [US/US]; 3780 Huron Circle, Corona, CA 92881 (US).

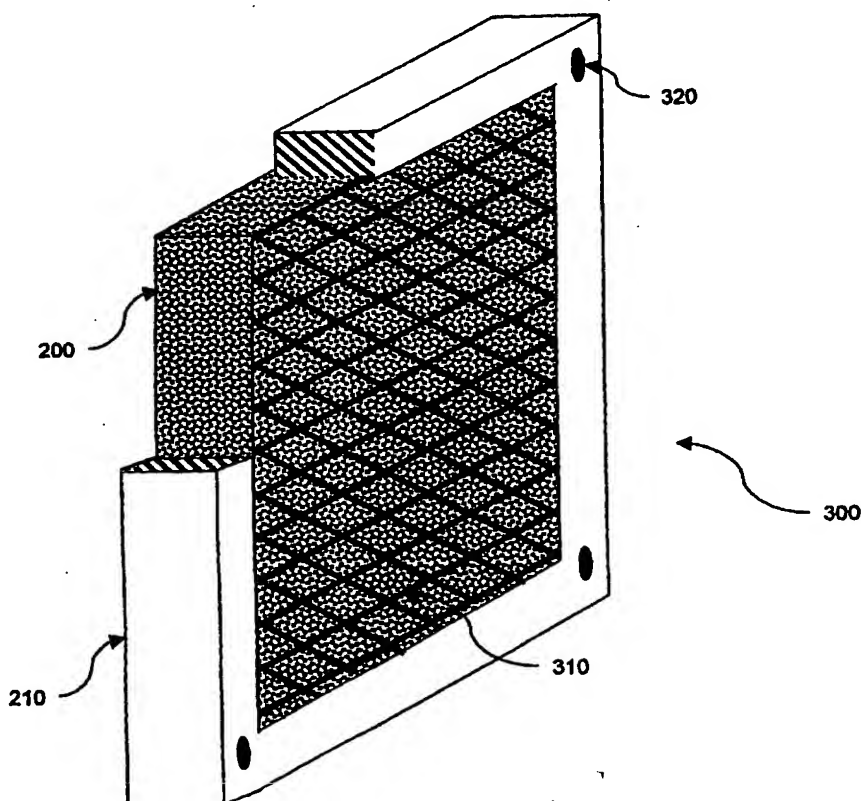
(74) Agents: **LEVY, Gerald et al.**; Pitney, Hardin, Kipp & Szuch L.L.P., 685 Third Avenue, New York, NY 10017-4024 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: EMI-ABSORBING AIR FILTER



(57) Abstract: Electromagnetic-energy absorbing materials are used to treat air filters (300), such as those used in association with electronic equipment thereby suppressing the transmission of electromagnetic interference (EMI) therethrough. Disclosed are processes and materials for applying EMI-absorbing materials to air filters thereby improving EMI-shielding effectiveness in an economically efficient manner. In one embodiment, an absorptive solution (110) is prepared using an absorptive material and a binding agent. A heavy coating of absorbing solution is applied (120) to an air filter substrate (100), for example by dipping or spraying. Excess absorbing material is subsequently removed (130) and the absorbing material cured (140), such that the passage of air through the filter remains substantially unimpeded. The resulting absorptive air filter is then optionally treated (160) with a flame retardant to meet a predetermined safety standard.

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:

13 May 2004

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/31119

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B01D 46/00

US CL : 055/385.6,385.7,524, DIG.5; 174 35R,35MS; 361/816,818; 427/244

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 055/385.6,385.7,524, DIG.5; 174 35R,35MS; 361/816,818; 427/244

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST txt. search terms: EMI, electromagnetic, filter, vent, air filter

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 2003/0085050 A1 (ZARGANIS et al.) 08 May 2003, Figs. 1-4, page 1 par. [0007], page 2 pars. [0013]-[0022], page 3 par.[0029]-page 4 par[0042].	1-6,10-11,14-16,18-24,28,31-36
X	US 5,506,047 A (HEDRICK et al.) 09 April 1996, Figs. 1-2, col. 2 line 45-col. 6 line 25.	1-6,10-24,26-28,31-36
X	US 5,431,974 A (PIERCE) 11 July 1995, Figs. 1-5, col. 3 lines 25-50.	1-6,12-16,18-20
A,P	US 6,552,900 B1 (HOEFER et al.) 22 April 2003.	1-36
A	US 6,426,459 B1 (MITCHELL) 30 July 2002.	1-36
A	US 6,211,458 B1 (MITCHELL et al.) 03 April 2001.	1-36
A	US 6,171,357 B1 (GUTTMANN) 09 January 2001.	1-36
A	US 6,063,152 A (TETER) 16 MAY 2000.	1-36
A	US 5,519,168 A (OWENS) 21 May 1996.	1-36



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Date of the actual completion of the international search

09 March 2004 (09.03.2004)

Date of mailing of the international search report

07 APR 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Duane S. Smith

Telephone No. 571-272-0987

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## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,546,359 A (CICCARELLI et al.) 08 December 1970.	1-36